Development of Automatic Vehicle Plate Detection System

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***Abstract*— This paper presents the development of automatic vehicle plate detection system using image processing technique. The famous name for this system is Automatic Number Plate Recognition (ANPR). Automatic vehicle plate detection system is commonly used in field of safety and security systems especially in car parking area. Beside the safety aspect, this system is applied to monitor road traffic such as the speed of vehicle and identification of the vehicle's owner. This system is designed to assist the authorities in identifying the stolen vehicle not only for car but motorcycle as well. In this system, the Optical**

prominent technique employed by researchers to analyse image of vehicle plate. The limitation of this technique was the incapability of the technique to convert text or data accurately. Besides, the characters, the background and the size of the vehicle plate are varied from one country to other country. Hence, this project proposes a combination of image processing technique and OCR to obtain the accurate vehicle plate recognition for vehicle in Malaysia. The outcome of this study is the system capable to detect characters and numbers of vehicle plate in different backgrounds (black and white) accurately. This study also involves the development of Graphical User Interface (GUI) to ease user in recognizing the characters and numbers in the vehicle or license plates.

***Keywords*—** Vehicle plate detection system, image processing technique, Optical Character Recognition